

RCRA Corrective Action Environmental Indicator Forms Addendum

Completed by: <i>Richard Aleshire, RWQCB</i> <i>Frank Dellechaie, DTSC</i> <i>Ray Saracino, EPA</i> <i>Jenny Wu, EPA</i>	Date: <i>1/1/15/00</i>
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	“X” all that apply:	
Facility Name: <i>Raytheon Electromagnetic Systems Division</i> (include a.k.a) Street Address: <i>6380 Hollister Avenue</i> City, State: <i>Goleta, CA 93117-5397</i> EPA ID#: <i>CAD 001 425 206</i>	NPL Site?	
	BRAC Site?	
	GPRA Baseline?	X
	EJ Site?	
	Near-bankrupt?	
Facility Contact Name: <i>Thomas Meade</i> Company: <i>Raytheon</i> Street Address: <i>(same as facility address)</i> City, State: Phone: <i>(805) 879-2892</i> E-mail:		

Agencies Involved in Remedial Oversight (Mark an “x” at the left of the boxes that apply:)					
	DTSC Site Mitigation - Region __		Federal CERCLA	X	RWQCB - Region <u>3</u>
	DTSC Permit Unit - Region __		Federal RCRA		Other (specify)

Project Manager Interviewed: <i>Richard Aleshire</i> Agency: <i>RWQCB Region 3, Central Coast Region</i> Phone: <i>(805)542-4631</i> email: <i>raleshir@rb3.swrcb.ca.gov</i>

Site Summary:

Raytheon designs radar and other electronic systems. RWQCB has issued a letter to Raytheon dated November 10, 1997 requesting submittal of a work plan to cleanup groundwater contaminants beneath the site. Richard Aleshire is the project manager.

Waste streams include plating and VOC wastes, some of which were stored in a 5000 gallon UST. The tank was removed in 1987. According to the 1991 Preliminary Assessment, no soil remediation was conducted in this tank area. DTSC issued a RCRA permit on June 3, 1987. There are three SWMUs which include: 1) the drum storage area, 2) the waste water treatment area, and 3) the research and development waste accumulation area. It is unclear whether surface and subsurface soil contamination has been fully characterized and addressed.

There is a municipal well for the Goleta Water District approximately 0.4 miles away and Goleta Slough is 0.5 miles away. Historically, PCE had a maximum concentration of 1100 ppb at well-110S. A dual-phase groundwater and soil-vapor extraction system began operating in July 1998. Since then, VOC concentrations have dropped significantly. The current maximum concentrations at well-110S are PCE (90 ppb), TCE (10 ppb), and cis-1,2-DCE (8.9 ppb).

CA 725 Current Human Exposures Under Control

Current Human Exposures Under Control Determination ("x" appropriate box)		If determination is NO or IN , the likelihood of achieving Els by 2005 is ("x" appropriate box):	
	YES	X	Likely by <u>2003</u> (insert year)
	NO		Unlikely
X	IN (Insufficient information)		Difficult to determine
	No determination was made		
If determination is YES , it falls under the following categories: ("x" all that apply)		If determination is NO or IN , it falls under the following categories: ("x" all that apply)	
	Final stages of C/A		Early stages of C/A
	Stabilization measures implemented		Indoor air issues
	No groundwater contamination		Abandoned, near-bankrupt
	Undergoing redevelopment		Technical limitations Please specify (complex hydrogeology, contaminants, large area):
	Other:		Uncooperative
			Administrative delays
		X	Other: <i>soil contamination unknown</i>

For sites with **NO or IN** determinations, provide a description of the next steps which will be taken to achieve the Current Human Exposures El:

Surface Soil and Subsurface Soil

The facility should delineate the surface and subsurface soil contamination. While DNAPLs (dense non-aqueous phase liquids) would have likely migrated to groundwater, and groundwater concentrations are low, contaminated surface and subsurface soil should be documented and/or addressed.

Indoor Air

Impacts to indoor air appear unlikely, given the relatively low concentrations in groundwater. However, since soil concentrations are unknown, their contribution to indoor air impacts cannot be determined. Once surface and subsurface soil contaminants are documented and/or investigated, the facility should be able to determine whether there are unacceptable impacts to indoor air.

Groundwater

Based on the current groundwater monitoring data, it appears that on-site groundwater contaminants are being effectively captured. However, it is unclear whether contaminated groundwater has migrated off-site. Data from 1994 and 1995 indicate that VOC concentrations in shallow downgradient wells (MW-112 and MW-113) were relatively low prior to the operation of the dual-phase extraction system. Additionally, the highest groundwater VOC concentrations on-site are relatively low. However, in the last several years, no monitoring data was available at MW-112 and MW-113 to indicate groundwater is contained on-site. Based on an October 2000 correspondence from the facility to the RWQCB project manager, the facility plans to sample and report monitoring results at all wells. At that time, we recommend the facility determine whether offsite migration is occurring and whether the municipal well at the Goleta Water District might be impacted.

CA750 Migration of Contaminated Groundwater Under Control

Migration of Contaminated Groundwater Under Control ("x" appropriate box)		If determination is NO or IN , the likelihood of achieving Els by 2005 is ("x" appropriate box):	
	YES	X	Likely by <u>2002</u> (insert year)
	NO		Unlikely
X	IN (Insufficient information)		Difficult to determine
	No determination was made		
If determination is YES , it falls under the following categories ("x" all that apply):		If determination is NO or IN , it falls under the following categories ("x" all that apply):	
	Final stages of C/A		Early stages of C/A
	Stabilization measures implemented		GW/SW issues
	No groundwater contamination		Abandoned, near-bankrupt
	Undergoing redevelopment		Technical limitations, Please specify (complex hydrogeology, contaminants, large area):
	Other:		Uncooperative
			Administrative delays
		X	Other: <i>need more data and/or documentation</i>

For sites with **NO or IN** determinations, provide a description of the next steps which will be taken to achieve the Migration of Contaminated Groundwater Under Control El:

Groundwater

Based on the current groundwater monitoring data, it appears that on-site groundwater contaminants are being effectively captured. However, it is unclear whether contaminated groundwater has migrated off-site. Data from 1994 and 1995 indicate groundwater concentrations in downgradient shallow wells (MW-112 and MW-113) were relatively low prior to the operation of the dual-phase extraction system. Additionally, since the dual-phase extraction system was installed, the highest groundwater VOC concentrations on-site are low.

Still, in the last several years, no monitoring data was available at MW-112 and MW-113 to indicate groundwater is contained on-site. Based on an August 23, 2000 correspondence from the facility to the RWQCB project manager entitled "Re: Workplan for Installation of Additional Groundwater Monitoring Wells, Additional Sampling, and Field Pilot Testing", the facility plans to sample and report monitoring results at all wells and install additional monitoring wells. As planned by the facility, we recommend the facility demonstrate at that time whether contaminated groundwater is stabilized and the remedial system is effective.